

**Amendments to the Claims:**

This listing of the claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1-16. (canceled)

17. (new) A process for producing a composite semipermeable hollow fiber membrane comprising the following steps:
- (a) producing the polysulfone porous hollow fiber membrane by dry-set membrane formation; and
  - (b) producing the polyamide ultrathin layer by an interfacial polycondensation reaction between at least one multifunctional amine and at least one multifunctional acid halide on the outer surface of the porous hollow fiber membrane, wherein the interfacial polycondensation reaction is carried out by
    - (i) bringing the polysulfone porous hollow fiber membrane into contact with a controlled concentration of a multifunctional amine solution, wherein the concentration ratio of the multifunctional amine solution is kept constant during membrane production; and
    - (ii) bringing the hollow fiber membrane into contact with a controlled concentration of a multifunctional acid halide solution;
- wherein the composite membrane comprises (a) a polysulfone porous hollow fiber membrane and (b) a polyamide ultrathin layer formed on an outer surface of the porous hollow fiber membrane, having the characteristics:
- that in the infrared absorption spectrum obtained from the surface of the polyamide ultrathin layer of the composite hollow fiber membrane, the ratio  $T (=A_a/A_s)$  of absorption intensity  $A_a$  at the absorption peak revealing C=O of polyamide in the region of 1600-1700  $\text{cm}^{-1}$  to absorption

intensity  $A_s$  at the absorption peak revealing polysulfone at a wavenumber around  $1586\text{ cm}^{-1}$  is at least 0.1 and not higher than 1.5 and that whose sucrose removal is 92% or more and whose water permeability is  $0.2\text{ m}^3/\text{m}^2/\text{day}$  or more with respect to 0.1 wt.% aqueous sucrose solution, under an operating pressure of 0.3 MPa at a temperature of  $25^\circ\text{C}$  and at pH of 6.5.

18. (new) The process according to claim 17, wherein steps a and b are successively carried out.
19. (new) The process according to claim 17, wherein at least one of the multifunctional amine or the multifunctional acid halide comprises at least one selected from the group consisting of trifunctional amine, trifunctional acid halide or tetrafunctional acid halide.
20. (new) The process according to claim 17, wherein at least one of the multifunctional amine is piperazine and the multifunctional acid halide comprises at least one selected from the group consisting of trifunctional acid halide or tetrafunctional acid halide.
21. (new) The process according to claim 17, wherein the concentration ratio of the multifunctional amine to the multifunctional acid halide is 20:1 to 0.1:1.